### 8.2 Key Concepts 3 Exponent Rule When a Power is Raised to Another Exponent Worked Example

Example: Simplify $\left(d^{4}\right)^{3}$.
Solution: When a power is raised to another exponent, multiply the exponents, and keep the base the same.
$\left(d^{4}\right)^{3}=d^{4 \times 3}$

$$
=d^{12}
$$

## Practice:

1. Simplify $\left(8^{3}\right)^{5}$ by writing as a single power.
2. Simplify $\frac{\left(v^{5}\right)^{4}}{v^{12}}$.

Answers: 1. $8^{15}$ 2. $v^{8}$

